

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	
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Sanjay GHEMAWAT et al.	)	<b>ATTN: M/S AF</b>
	)	
Application No.: 10/608,039	)	Group Art Unit: 2161
	)	
Filed: June 30, 2003	)	Examiner: C. Daye
	)	
For: GARBAGE COLLECTING SYSTEMS	)	
AND METHODS	)	

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Applicants respectfully request review of the final Office Action, dated June 14, 2006, in view of the Remarks below and in conjunction with the Notice of Appeal filed concurrently with this request.

**Remarks** begin on page 2 of this paper.

REMARKS

Claims 1-25 are pending in this application. Claims 1, 2, 4-7, 10-13, and 20-25 stand rejected under 35 U.S.C. § 102(b) as anticipated by Mattis et al. (U.S. Patent No. 6,209,003). Claim 3 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Mattis et al. in view of Manley et al. (U.S. Patent Application Publication No. 2003/0182330). Claims 8, 9, and 14-19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mattis et al. in view of Hisgen et al. ("New-Value Logging in the Echo Replicated File System," June 23, 1993). In the Advisory Action, mailed September 11, 2006, the Examiner mainly reiterated the rejection set forth in the final Office Action, dated June 14, 2006. Applicants respectfully request review of the final rejection based on the reasons summarized below.

The rejection of claims 1, 2, 4-7, 10-13, and 20-25 under 35 U.S.C. § 102(b) as allegedly anticipated by Mattis et al. contains factual deficiencies. For example, each of independent claims 1, 12-14, 20, 24, and 25 includes features that are clearly not disclosed by Mattis et al.

With regard to independent claim 1, Mattis et al. does not disclose or suggest renaming a file that is identified to be deleted, as recited in claim 1. In fact, Mattis et al. specifically teaches away from renaming a file. See, for example, the arguments at pages 3-5 of the Request for Reconsideration filed August 14, 2006.

Mattis et al. also does not disclose or suggest permanently deleting the renamed file a predetermined amount of time after renaming the identified file as part of a garbage collection process, as further recited in claim 1. See, for example, the arguments at pages 5-9 of the Request for Reconsideration filed August 14, 2006.

Mattis et al. also does not disclose or suggest identifying, to one of the servers, one of the chunks that corresponds to the permanently deleted file, as further recited in claim 1. See, for example, the arguments at pages 9-10 of the Request for Reconsideration filed August 14, 2006.

For at least these reasons, Applicants submit that claim 1 is not anticipated by Mattis et al. Claims 2, 4-7, 10, and 11 depend from claim 1 and are, therefore, not anticipated by Mattis et al. for at least the reasons given with regard to claim 1. Claims 2, 4-7, 10, and 11 are also not anticipated by Mattis et al. for reasons of their own.

For example, claim 4 recites that the predetermined amount of time is a user-configurable amount of time. Mattis et al. does not disclose or suggest the combination of features recited in claim 4. See, for example, the arguments at pages 10-11 of the Request for Reconsideration filed August 14, 2006.

For at least these additional reasons, Applicants respectfully submit that claim 4 is not anticipated by Mattis et al.

Claim 10 recites maintaining versions of chunks; identifying a stale chunk based on the versions of the chunks; and deleting the stale chunk. Mattis et al. does not disclose or suggest the combination of features recited in claim 10. See, for example, the arguments at pages 12-13 of the Request for Reconsideration filed August 14, 2006.

For at least these additional reasons, Applicants respectfully submit that claim 10 is not anticipated by Mattis et al.

Independent claims 12 and 13 recite features similar to, but possibly different in scope from, features recited in claim 1. Claims 12 and 13 are, therefore, not anticipated by Mattis et al. for at least reasons similar to reasons given with regard to claim 1.

With regard to independent claim 20, Mattis et al. does not disclose or suggest identifying stale replicas based on the associated version information. See, for example, the arguments at pages 13-14 of the Request for Reconsideration filed August 14, 2006.

Mattis et al. also does not disclose or suggest identifying, to one of the servers, one of the replicas stored by the server that corresponds to one of the deleted stale replicas, as further recited in claim 20. See, for example, the arguments at pages 14-15 of the Request for Reconsideration filed August 14, 2006.

For at least these reasons, Applicants submit that claim 20 is not anticipated by Mattis et al. Claims 21-23 depend from claim 20 and are, therefore, not anticipated by Mattis et al. for at least the reasons given with regard to claim 20. Claims 21-23 are also not anticipated by Mattis et al. for reasons of their own.

For example, claim 21 recites that the version information for one of the replicas is updated each time a lease is granted for the one of the replicas. Mattis et al. does not disclose or suggest this feature. See, for example, the arguments at pages 15-16 of the Request for Reconsideration filed August 14, 2006.

For at least these additional reasons, Applicants respectfully submit that claim 21 is not anticipated by Mattis et al.

Independent claims 24 and 25 recite features similar to, but possibly different in scope from, features recited in claim 20. Claims 24 and 25 are, therefore, not anticipated by Mattis et al. for at least reasons similar to reasons given with regard to claim 20.

The rejection of claim 3 under 35 U.S.C. § 103(a) as allegedly unpatentable over Mattis et al. in view of Manley et al. contains factual deficiencies.

Claim 3 recites receiving an un-deletion instruction regarding a file, and restoring an original name to the file without permanently deleting the renamed file. Claim 3 is patentable over Mattis et al.

and Manley et al., whether taken alone or in any reasonable combination. See, for example, the arguments at pages 17-19 of the Request for Reconsideration filed August 14, 2006.

In the Advisory Action, the Examiner newly cited paragraph 0132 of Manley et al. for allegedly disclosing restoring an original name to a renamed file. Applicants disagree. At paragraph 0132, Manley et al. discloses a rollback operation that enables the undoing of a set of changes to a replicated data set. Nowhere in this section does Manley et al. disclose or suggest restoring an original name to a renamed file that has been identified to be deleted without permanently deleting the renamed file.

For at least these reasons, Applicants submit that claim 3 is patentable over Mattis et al. and Manley et al., whether taken alone or in any reasonable combination.

The rejection of claims 8, 9, and 14-19 under 35 U.S.C. § 103(a) as allegedly unpatentable over Mattis et al. in view of Hisgen et al. contains factual deficiencies.

Claims 8 and 9 depend from claim 1 and are, therefore, patentable over Mattis et al. and Hisgen et al., whether taken alone or in any reasonable combination. See, for example, the arguments at page 20 of the Request for Reconsideration filed August 14, 2006.

With regard to independent claim 14, Mattis et al. and Hisgen et al., whether taken alone or in any reasonable combination, do not disclose or suggest identifying, to one of the servers, one of the chunks that corresponds to one of the deleted orphaned chunks. See, for example, the arguments at pages 20-21 of the Request for Reconsideration filed August 14, 2006.

For at least these reasons, Applicants submit that claim 14 is patentable over Mattis et al. and Hisgen et al., whether taken alone or in any reasonable combination. Claims 15-17 depend from claim 14 and are, therefore, patentable over Mattis et al. and Hisgen et al. for at least the reasons given with regard to claim 14.

Independent claims 18 and 19 recite features similar to, but possibly different in scope from, features recited in claim 14. Claims 18 and 19 are, therefore, patentable over Mattis et al. and Hisgen et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given with regard to claim 14.

In view of the foregoing remarks, Applicants submit that clear deficiencies exist with respect to the rejections of claims 1-25. Therefore, Applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including

extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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